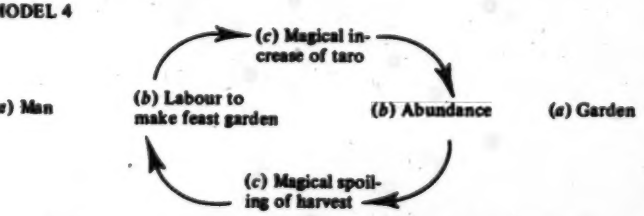
5: Schwimmer E-4,5 (1966-1967) 1973
OJ23 Orokaiva OJ23
Mountain Orokaiva

This model is very similar to the exchange cycle in which meat is served as the mediating element. I have already pointed out that taro, displayed on a huge and impressive platform, is an essential part of the gifts offered at a feast. I did not then quote the folk explanation of this. I was told that harvest feasts are beneficial to the donors because feasts make the taro grow well. On further enquiry I found that the Orokaiva believe that taro *always* grows well except if sorcerers from other villages put a spell on it. One of the rituals at a feast is a kind of rain-making ritual performed by medicine men from among the *guests*. When I asked: 'Why the guests?', I was told that they would be expert at removing the bad magic from the gardens because, in all probability, it was they who put it there! We can now see why it is that the guests' forgiveness, in the model, leads directly to a magical increase of taro. I was also told that the increase in the taro harvest would enable the hosts to give another feast soon afterwards. As this second feast would normally not be given to the same group as the first, the idea suggested by the model is that successful feasts enable a village to give an infinite series of feasts, thus attracting an infinite number of allies, one after the other, and becoming infinitely powerful.

In reality, however, this infinite series is interrupted by disappointing harvests and other misfortunes. Such misfortunes are ascribed to the sorcery of enemies, and in order to remove this sorcery, a *peka* is made with the enemies. A feast is held; and it is thought that matters will again improve. There is a periodicity of shortage and abundance, coinciding with the quality of external relations. Prior to the *pax Australiana*, bad external relations caused frequent warfare, the marauding of gardens or the lack of attention to gardens. Feasts had to be held occasionally so that the intensity of warfare would not lead to a serious depletion of food stocks. Feasts thus produced an abundance of food, because they provided peace, or at least a respite from war. The institution of feasting kept the scale of warfare down to a level which the people could economically afford. This ecological basis of the cyclical movement between war and peace is well documented in Rappaport's book about the Tsembaga (1968).

In terms of the model developed in this chapter we may express this cyclical process as follows:

MODEL 4



This exchange cycle belongs to the level of ecology rather than of social relations. The exchange partners in the model are man and his garden. The objects of exchange are the man's extra labour, needed to make a feast garden, and the abundance of taro that his garden can provide in good seasons. But it will not do so merely in response to man's labour. Labour alone cannot

5: Schwimmer E-4,5 (1966-1967) 1973
OJ23 Orokaiva OJ23
Mountain Orokaiva

539 776 177 [535] a victim and Christ's Passion. He also pointed out that by performing this chant, the dancers were sacrificing their bodies to Christ. There was no harm in this performance, he said, because the sentiments in both forms of religion were the same.

Councillor Ase added a more earthy dimension to the pastor's words when he declared that it was Jesus Christ who had given the Papuans the benefit of wage labour. This sentiment might have appealed to Governor Murray. It completes the image of Jesus as *dema*. First, Jesus was killed and gave His body to mankind, or to His followers, by being crucified. His body is still being consumed at Communion services, the deep sacredness of which the Papuans recognise. He also left behind him immense *gifts*: the technology (cargo) of the white man, and money with which men may acquire this cargo. Wage labour is one of the means now open to the Papuans for acquiring at least a little of this money and cargo. Thirdly, like all *dema*, he left behind a set of rules which men have to follow if they are to obtain full access to the particular kind of *tno* he bequeathed upon mankind.

182 771 776 177 It now becomes a little clearer how the Orokaiva have found a rationale, satisfying to themselves, for the behaviour patterns they are adopting in response to the impact of white power. The coming of the white man is viewed as an event of the same magnitude as the addition of a new *dema* to the pantheon. The most crucial fact about this new *dema* is that it was through his help that the white man obtained extraordinary wealth and power. It was hinted to me from time to time that the white man should have been far more generous in sharing this wealth and power with the Papuans. At the same time, however, it was emphasised that the Orokaiva had already received some substantial benefits, for example the introduction of money, wage labour and cash cropping. My informant the councillor, whose contact with white authority had been somewhat closer than was usual in the district, claimed special knowledge about how European-type power might be obtained. It was on the basis of this knowledge that he felt entitled to advise his people to shift to another village. But his audience did not really believe he knew anything.

[623] [115]

While the councillor's competence was doubted, his basic ideas were generally accepted: Orokaiva progress was thought to depend on the following of prescriptions originating from the *dema* Jesus Christ. The white man had revealed only part of these prescriptions. (In this respect Orokaiva beliefs resembled those reported by Burridge 1960, 1969.) It was thought, moreover, that these rules prescribed ritual acts performed for the first time by Jesus Christ and now imitated by those who are fully initiated in His mysteries. While these Orokaiva beliefs may impede their understanding of the workings of white society, they do provide a rationale for those white behaviour patterns which Orokaiva are able to observe. They also provide a charter for the changes Orokaiva are actually adopting in their exchange system and elsewhere.

177 773 [731] One experience at Hohorita made me aware how closely the introduction of Western culture is identified with the action of traditional *dema*. Due to the death of most of the older men of the Sangara tribe at the time of the eruption, their descendants grew up at Hohorita without much knowledge of myths and traditions. Nonetheless, when I visited the village, a number of men spent several nights with me telling me what they knew. Their information would mostly be

5: Schwimmer E-4,5 (1966-1967) 1973
OJ23 Orokaiva OJ23
Mountain Orokaiva

relationship. They could conceivably have chosen a different explanation which would have provided a charter for the reinforcement of quite different relationships. If the eruption had not happened at all, the Orokaiva would most probably have taken the same direction, but the charter validating development and baptism would have been weaker for some time. It may be that the exchange ideology would have weakened before development started. The eruption, however, seems to provide Church and government with a most formidable arsenal of negative sanctions in case the relationship is ever broken through the fault of the Orokaiva. We may conclude that the Orokaiva, by their belief in a new kind of divine intervention (through the *dema* figure Jesus Christ), have been encouraged to make new types of economic, social and religious exchanges, while maintaining their assumption of an exchange-oriented universe, and that their philosophy has provided them, at least for a time, with a workable rationale for the contemporary world.

REFERENCES

1. The traditional time concepts of the Orokaiva are probably mainly restricted to what Evans-Pritchard (1939) called 'oecological' and 'structural' time. It is, however, very likely that they also had 'an historical perspective of their own, whatever its depth may be' – rather similar to the one described by M. Panoff for the Maenge (1968). Such a perspective would include not only the *dema* but also the scission of lineages and the settlement of villages. An Orokaiva described lineage fission to me by drawing a tree on the ground – using precisely the same symbolism as Panoff's Maenge informants. Orokaiva stories of the settlement of villages also abound, usually giving the name of the tree by which the settlers 'sat down' when they arrived.

   Pocock (1964) has argued that as culture change becomes more rapid under the impact of European contact, traditional time concepts undergo structural transformation to make them more nearly explanatory of the actual course of events. I believe that the identification of Jesus Christ with a *dema*, as argued in this chapter, is an example of such structural transformation.

2. For the location of Torogota, see Fig. 10.
3. Information on this point was derived from several local planters, including Mr. C. E. Searle of Awala. See also Howlett 1965.
4. Details on communication channels between government and people are given in Schwimmer 1967, 1969.
5. The Sasembata mission station is not in Sasembata village but just north of Kongohambo. See Fig. 10.
6. Reay has reported that 'the natives had no knowledge, or legend, of an earlier eruption' (*apud* Taylor, 1958: 21). My own study (Schwimmer 1969) suggests that this view, while not strictly incorrect, needs to be modified. My sources are tape-recorded myths and Miss Nancy White's manuscripts (White, n.d.).
7. Interview with Bishop Hand, January 1967.

[p.82 is blank]

5: Schwimmer E-4,5 (1966-1967) 1973
OJ23 Orokaiva OJ23
Mountain Orokaiva

community purpose. Whenever a new village is built it is necessary for some individual to give garden land. Often several individuals give a piece each, but such a gift does not entitle the donor to decide just who should live on each house site, nor to control in detail what residents do with their housing sites. Trees planted by householders remain theirs in perpetuity. Such gifts to the community are not balanced by any specific reciprocal gifts or services, but the donors benefit by the contiguity of the village to their gardening land and perhaps, in a diffuse way, they benefit in social and religious status. Similar gifts have also been made in recent times for co-operative cash-cropping ventures, such as rice-growing in the late 1940s and a recent rubber co-operative in Sivepe. Here again, the total 'company' land was contributed by a number of people, some of whom shared out parcels to persons interested in planting rubber trees. In such cases, donors told me they acted for the good of the community, and everybody emphasised that the recipients incurred no obligation.

423 621 431 [554]

Let us now summarise briefly what social benefits are being exchanged between partners in land transactions. Frequent as they are, voluntary land transfers are always treated, in ideological statements, as departures from a regular and more secure patrilineal pattern. It is a though a maternal uncle or affine or distant agnate has voluntarily assumed the role of fictional father of the borrower. One receives a benefit which, in the 'normal' state of affairs, would be given only to a younger brother or son. I do not know of cases where long-term borrowing of land in itself sufficed to induce a man to change his clan affiliation, as seems to happen among the Garia. In one case I quoted, a man adopted the lender's plant emblem, thus emphasising the element of fictional fatherhood. Other informants regarded this as entirely proper and highly sympathetic behaviour, though totally voluntary. Harvest gifts, however, were not wholly voluntary but expected. So was a certain filial attitude of loyalty, obligatory avoidance of quarrels, and willingness to perform supportive services. Only in the case of a son-in-law performing bride service did such an obligation place the borrower in a servant-like position. On the contrary, in most of the cases I quoted it was the lender who felt the stronger need to attract the borrower and enter into a closer relationship with him. For instance, the donor would often have a strong desire for a reliable military and political alliance with the borrower. If supportive familial services were needed, as in the case of old men and widowers, these services were not provided in repayment for land, but in fulfilment of a kinship-determined social obligation. By making a gift of land, the donor was doing no more than express his quasi-paternal sentiments.

423 425 571

We may conclude that, strictly, land is hardly ever an 'object of exchange', in that one cannot suggest any specific major counter-gift or counter-service which could be used to reciprocate. Allegiance and protection, benefits which the land-borrower usually does furnish, cannot be bought with land. They may be given as a response to quasi-paternal support and the enhancement of economic, social and ritual status. Social benefits of this kind are regularly exchanged between non-agnates. In fact, it may be said that it is from social exchanges of this kind between non-agnates that Orokaiva society derives its cohesion or, to use Lawrence's phrase, maintains its security circle.

423 437 571 [182]

Why is land appropriate as a mediating object in such exchanges of social

423 431 571

5: Schwimmer E-4,5 (1966-1967) 1973
OJ23 Orokaiva OJ23
Mountain Orokaiva

lies neither in communion nor in expiation, as they are essentially magical devices to bring about a transformation in social relations with a partner.[1]

While this partner may on occasion be a close kinsman who is given a feast for some special reason, he often has a rather distant position in the exchange network of the donor, with whom commensality occurs only on rare occasions. Not only do feasts tend to extend in this way the range of individual social networks but they are especially apt to extend the range of social relations existing between villages. Feasts are often given by one village to another, thus leading to the establishment of at least one partnership between each household of the host village and each household of the guest village.

The explanation of pig sacrifices requires an elaboration of my model of exchange. The models used so far may be called *transactional*. One may distinguish between positive transactional cycles (in which the two sides exchange benefits mediated by gifts) and negative transactional cycles (in which the two sides exchange sanctions mediated by penalties). In addition one may construct *temporal* cycles, which may show the alternation between friendship and anger, offence and repentance, mortification and forgiveness. A violation of the exchange code will shift a relationship from a positive into a negative transactional cycle, while a reconciliation feast will restore positive reciprocity. The value of pig sacrifices lies in their power to set a relationship upon a course of positive exchanges where, previous to the sacrifice, the two sides were engaged in a mutually injurious exchange of sanctions.

This implies an assumption about the nature of social relations: namely that they cannot be described as intrinsically positive or negative. One cannot divide the Orokaiva social universe into concentric circles distinguishing between permanently friendly and permanently hostile groups. The most one may do (if one has data over a sufficient period) is to show that in the association between villages A and B the cycles of negative reciprocity have been relatively short while between villages A and C they have been relatively long. In this sense one may call B a 'friendly' and C a 'hostile' village, and it may be expected that inter-village feasts, in which pig sacrifices figure, will be more frequent between A and B than between A and C.

This conceptualisation is not based on my own private theory of sociality, but on the Orokaiva expressed belief that strife is a 'natural', i.e. *derna* established consequence of social relations. This belief implies that any relationship will tend to alternate between positive and negative cycles, primary kin relationships not excepted. In *original time*, we find only positive cycles of reciprocity; strife periodically engenders negative cycles, while pig sacrifices lead to the periodic restoration of positive reciprocity.

2. *The Wild Pig: Marauder*

To the Orokaiva the wild pig is above all a troublesome enemy, as it attacks taro crops in gardens and is liable to kill an unwary hunter. It lives in the jungle where it is believed that ghosts (*sovai*) may enter its body. A pig inhabited by a *sovai* is especially dangerous and harmful to man. The ontology of the pig is explained in a series of myths of which the following, recorded by Williams, states its message most clearly:

621 possession of its own tracts of land' (1928:125). In view of the
614 uncertainties regarding attributes which, we have noted, Williams associates with the 'clan', we can not readily say whether our discussion in the following sections confirms or contradicts this statement on land tenure.

614 Fighting within the tribe (emboge), though frequent,[1] was
578 governed by restrictive conventions absent from the conduct of
[721] deliberate raids (isoro). Organized aggression was rare and the deliberate destruction and homicide characteristic of the tribal raid were absent from the skirmishes which arose periodically in the course of ordinary interclan relationships. Disagreement over rights to land in the neighbourhood was one of a number of causes of interclan hostilities (see Williams 1930:107, 163). But we found no evidence from the area discussed in this report to indicate that land disputes between members of different clans
[721] involved the mobilization of their descent groups. Informants firmly denied that people would resort to attacking neighbours from another clan in order to acquire land.

[728] In presenting a picture of continuous feuding between local kin groups within the tribe, Keesing (1951:6) quotes Williams out of context: Williams (1930:311; and 160-7) was referring to the ineffectiveness of intertribal truces not to instability of peaceful relationships between these smaller groups when he says that no village lived in permanent security for fear of raids from its neighbours. The tribe lacked close political cohesion but relations between local groups within it do not seem to have been as precarious as Keesing describes. As Plant (1951: Appendix 3) indicates, a network of affiliations between descent groups in widely scattered areas formerly ensured generaly peaceful relations within the tribe.

614 The frequency with which fragments of one clan are found
701 scattered in 3 or more districts of the tribe suggests that here
[182] Langness' discussion of the Highlands (Watson, ed. 1964:174) may be relevant when he points to the probability of a causal connection between continuous violent warfare and the weakly patrilineal structure of groups,[2] in view of the fact that most warring groups needed continually to replace losses in numerical strength by recruiting outsiders; they would repeatedly scatter, regroup, take refuge or attach themselves permanently to stronger groups for

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[1] In fact, Williams (W.37) records that members of Jegase clan once fought some of the Sarahu, even though the names of the 2 clans were linked as the name of the political unit which he defined (see p.34).

[2] See sections c-f of this chapter.

433 hunting. The little time devoted to the preparation of tools for
512 the main subsistence enterprises reflects the degree of technological substitution which has occurred since contact.

Construction and repair of houses normally continues throughout the year, here occupying 1.6 hours per man-week. In Sivepe such activity declined during the course of the survey as plans were formulated to transfer the village to the new site. Of 13 houses whose occupants were not newcomers to the village, 4 were completely rebuilt during the year and, in addition, 2 completely new houses were built and a number of extensions and repairs made to others. This 'crude birth rate' suggests the life of a house to be about
[342] 3.25 years. Since each house takes about 110 man-hours to build (including the gathering of materials), about 0.6 hours per man-week must be devoted to reconstruction in a normal year. In Sivepe about 0.9 hours were devoted as a result of additional houses being built, the balance (0.7 hours) accounting for repairs and minor extensions.

[252] Household tasks occupy 5.3 hours per man-week, cooking predominat-
[462] ing with 5.0 hours. Of necessity, they vary little through the year.[1] Much of the time taken up by cooking involves simply tend-
[372] ing the fire on which the food is being prepared and it is then that the women often work on their string bags. Most firewood is obtained as a by-product of clearing, suitable lengths of timber being stacked in the garden to dry out and then carried to the village as required.

All the above subsistence activities (food production, construction, handicraft work and household tasks) can be described as 'productive' in that 'the purposeful alteration and combination of physical material' (Udy 1959:2) can be discerned in them. Together they account for 26.6 out of the total of 30 hours per man-week devoted to the subsistence sector of the economy.

512 Only 3.4 hours per man-week are spent in fulfilling social
182 obligations. Although categorised here as non-productive activity, it should be stressed that ritual and informal social interaction are part of the fabric of the total economic system and the kinship networks which form the framework for these interactions serve as the major mechanism for distributing goods produced within the subsistence economy.

171 Belshaw, in discussing Melanesian exchange, states (1965:35):
431

> A primary point to note is that a very high proportion of social contacts between adults is accompanied by gift-giving.

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[1] The figure for cooking in period I is an estimate, derived from averaging the figures for the following periods, since relevant records were not initially kept.

Security of tenure

423 241 [182] [829] It is often suggested that the main benefit from tenure conversion is the provision of security of tenure for villagers who wish to plant cash crops. The Ombi-Tara people, however, did not consider security of tenure as a major benefit of conversion. They explained that each man had previously held individual rights to land which were sufficiently secure for him to plant cocoa and coffee. A man could plant such cash crops without consulting the clan leader or other members of his clan, and without others disputing ownership of the crop or distribution of the proceeds. [578] Fourteen people did mention that conversion and the introduction of cement and wooden corner pegs would help to prevent disputes; but they felt the disputes to have been caused by the previous small size of individual plots which sometimes made it difficult for a man to extend his planting (because he would be encroaching on another's land); and to vagueness of boundary lines. Some also referred to the need to clearly mark out land boundaries to forestall potential encroachment by persons from outside Ombi-Tara.[1]

Consolidation of holdings

423 311 361 [829] Most Ombi-Tara people saw consolidation of their previously scattered holdings as the main benefit from tenure conversion.[2] Many people drew finger diagrams on the ground to explain how conversion led to consolidation. Under the traditional tenure system cash cropping involved long walks from village to food gardens and to cash crops.[3] Consolidation not only reduces walking time, but also allows an individual to undertake large-scale planting in a single area. He was previously unable to do this because of the small amount of land he held in each plot, and in some cases because of the small total amount of land to which he

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[1] In contrast to the Ombi-Tara situation Crocombe and Hogbin (1963:72-80) found in another Orokaiva village that lack of security of tenure was a factor discouraging certain individuals from planting cash crops.

[2] Mentioned by thirty of the thirty-seven blockholders interviewed, including the four most influential people - Charles, the two clan leaders and the Local Government Councillor. These people should be distinguished from the 20 per cent or so mentioned earlier for whom the innovation of conversion was less significant than the change to planting rubber.

[3] Waddell (1966:7) found in another Orokaiva village that time spent travelling to and from places of activity was about 15 per cent of the total time devoted to that activity.

423 had rights.[1] Conversion has caused a redistribution of land rights,
311 with some people losing and others gaining land. Several men who
361 claimed they had less land after conversion than before said that
829 twenty acres was ample for their needs and that they were pleased to give up some land to help their co-villagers.

657 There are indications that conversion at Ombi-Tara has facili-
423 tated co-operation between villagers who are planting cash crops.
182 Previously any man who wished to plant cash crops had to work with little assistance, often in a relatively inaccessible area. Since
476 conversion has been introduced, the new road gives easy access to all blocks and people are more easily able to help one another.

361 Paradoxically, conversion to individual holding of land appears
491 to have strengthened intervillage, interclan and interpersonal co-operation and to have fostered a community spirit. Intervillage
657 co-operation is demonstrated by the establishment of a joint Ombi-
423 Tara bank account to purchase equipment for the bush rubber
621 processing unit, and by joint discussions on the nature of the
182 new tenure system. Interclan co-operation is seen in the leader of the Kusi clan granting permission for the allocation of a block on Kusi land to a man of Mumu clan. Interpersonal co-operation is illustrated by the apparent willingness of large landholders to give up all previously held land rights without receiving any compensation, in order to enable all to take part equally in the scheme.

659 The Ombi-Tara people are pleased and flattered that many people
423 visit and inspect the blocks. They heard that Ombi-Tara was men-
182 tioned on the radio and are happy that others ('people all over
186 Papua-New Guinea') should know of their experiment. When two Australian friends of mine paid a short visit to Ombi they were asked with expectant pride if they had heard of the Ombi-Tara scheme in Australia. The leader of the Mumu clan said, 'We want Ombi-Tara to have a big name like England, Japan, Hong Kong, Rabaul and Lae'.

Publicity and information

657 Most Ombi-Tara people (82 per cent) said that they first heard
423 of the possibility of converting land to holding under individual
177 title after the visit of the Agricultural Officer in late 1963. No one reported hearing first about conversion through Local Government Councils, from the Anglican Mission, on the radio or through

[1] The then District Agricultural Officer considered consolidation of fragmented holdings to be one of the main benefits that would emerge at Yega, the first tenure conversion scheme in the Northern District (Belfield 1962:1-2).

Chapter 4

Effects of conversion at Ombi-Tara

Land use

657 423 182 Since conversion the blockholders have each planted an average of three and a half acres of high yielding rubber and some have cleared a further two or three acres in preparation for further planting.

311 241 Most households are interplanting their food crops with the rubber seedlings as they say it saves time and effort if all crops are on one plot instead of scattered as before conversion. Thirteen people reported that they have food crops growing on unconverted land outside their blocks. Six of these had blocks about twenty-five minutes' walk from the village, and have planted some food on clan land closer to home. Three of the others said that they intended to transfer their food crops on to the blocks shortly. Three people reported that they have coffee trees which were planted before conversion growing outside the block.

[614] The Ombi-Tara people intend to keep the clan land outside the converted area for use by future generations or by members of the present generation who wish to expand their holdings.

Residence patterns

657 423 182 [361] Those people whose blocks are closest to the village have tended to remain in the village. Those with more distant blocks have either abandoned their village houses and moved to the blocks - six families have done this - or planted some food crops on clan land close to the village to avoid having to walk long distances to get food.[1]

[592] The traditional Orokaiva custom of living in single family households has been maintained, with only four of the thirty-five households at Ombi-Tara containing more than one family. In three

[1] Dakeyne (1965:136) notes that the Yega people moved on to their blocks soon after the Yega conversion scheme began.

657 of these four households one of the resident families intends to
423 build or is building a house into which it will move shortly.

182 Many who have remained in their village have erected temporary
592 shelters on their blocks in which they spend one or two nights at a time. None of the Tara people has left the village, but no one
657 has to walk more than ten minutes to reach his block.
423
182 Five of the six men who have moved with their families on to the blocks are living in two hamlets. In the first settlement, about
361 twenty-five minutes' walk from Ombi village, two men have built houses on their own blocks on either side of the access road. In addition, they have built a 'meeting house' in which passers-by can sit and chat, and a latrine. One is the son of the other's mother's brother.

In the second settlement, about forty-five minutes' walk from Ombi, three households are situated on one block. The three households belong to the blockholder, his sister's son (who holds an adjacent block) and his father's brother (who is not a blockholder).

[789] The sixth man to have moved from the village claimed that one of the old men at Ombi was destroying his taro by practising sorcery, and moved to his block, ten minutes' walk from the village, to protect it.

[592] Apart from this last man those who have moved to the blocks are living in small kinship groups rather than as individual farmers
[484] each on his own block. In addition, each of the block residents
[525] spent a considerable amount of time in Ombi village during our stay, particularly while gambling during the weekends. One brought his family to Ombi after his wife had a baby and stayed for a few days in the house of a kinsman.

Although only six men have moved to the blocks, another twenty said they would like to do so in order to be able to work on their rubber away from the distractions of village life, like Council and mission work. Most of these people said that they were 'not allowed' to move. Some said it was Administration policy that people should stay in their villages and quoted particular officers (from two different departments) who had told them not to leave the village. Some said that they were not allowed to move to the blocks until they had a 'licence' (possibly a reference to the title document) or until all the people in Papua-New Guinea had done so, or until the local member of the House of Assembly had been told about it in the House. Some said that they should not move until the Administration told them.

Three people said the Administration favours villagers living on their blocks. Two of these do so and the third said he is waiting till the other villagers move before he moves.

657 423 182 361 The Local Government Councillor presumed the Administration wanted people to stay in the village. He said that he would prefer to live on his block but would not move as he might be gaoled for doing so.[1] He had ordered two men from Ombi who started building houses on their blocks to stay in the village.

Administration officers said there was no longer an official policy on where people should live, but that individual officers had different ideas on the matter. As this is the source of much of the misunderstanding an official statement of policy through the Local Government Council may be helpful. Over half the people replied to the question 'where would you prefer to live - in the village or on the blocks?' by saying that whichever the government wanted they would do.

It has been said that conversion leads people to settle on their blocks, thus encouraging the breakdown of the village and lessening the attractions of village life for the younger generation, causing them to 'drift' to the towns. Several people, however, including one man who had intended going to Rabaul, mentioned that they preferred growing cash crops at Ombi-Tara to working for wages now that conversion has been introduced. It seems possible, therefore, that conversion may help to increase the attractiveness of the village rather than decrease it.

Social organisation

657 423 182 The land tenure system lies at the heart of social organisation and 'may actually define the social and economic status of individuals in an agrarian economy' like that of Papua-New Guinea (Parsons 1963:4). Any alteration in the tenure system is bound to have far-reaching social implications.

Social changes occurring at Ombi-Tara are related not only to tenure conversion but also to the wider adaptation which occurs when a subsistence society comes into contact with the market economy. Some traditional practices are abandoned, as the initiation ceremonies, the taro festivals and multi-village feasts have

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[689] [1] The idea that a person may be gaoled for moving out of his village seems to come from observing other people in the area being gaoled under Native Regulation 101 (Native Regulations 1939 of the Territory of Papua as amended). This Regulation empowers the magistrate to declare any isolated group of less than three houses a 'Forbidden Settlement' and to direct the native inhabitants 'to remove to a regular village or villages within their district within a time to be specified by him'. Failure to comply with such an order carries a fine of not more than $2 or imprisonment for up to two months.

657 been at Ombi-Tara, in favour of briefer parties which distract less
423 from market oriented activities.[1]

182 There was verbal evidence at Ombi-Tara of further rejection of
[829] old customs since the introduction of tenure conversion. Informants often suggested that conversion marks the beginning of a new life - 'Before we were not using our land well but now we are changing everything and we will live better'. Several previous innovations in the Northern District have been greeted in like fashion (see Belshaw 1951:249, and Crocombe 1964a:29-32).

[622] Leadership in the traditional societies of Papua-New Guinea is
[554] generally not inherited but achieved through personal excellence in economic and political organisation and the main activities of the society including a knowledge of land tenure arrangements. It
[614] was decided by the members of the Mumu clan that their clan leader was too old to understand and adapt to the new land system. His son was not considered clever enough to succeed him and eventually the thirty-five year old son of the leader's brother was chosen as successor.

[621] The introduction of tenure changes tends to favour younger men who no longer need to defer to their elders for cash crop land. Tenure conversion at Ombi-Tara may also affect the balance of 'informal' authority in the area by altering the balance of land rights. Before conversion some individuals had rights to consider-
[556] ably larger areas of land than others. This was of some significance in determining status and prestige. Since conversion, each individual has rights to twenty acres of land. The long-term effect of this equalisation on social organisation and informal status and prestige systems may be of some significance.

[614] The functions of the clan leader are little changed by the new
[627] tenure system. As before, he has no jurisdiction over land held by individuals. He previously had limited authority to intervene if one man planted on another's land without permission and under the new system can prevent one man planting behind another's block. He is charged with preventing people from other clans or other areas planting on his clan's land in such the same way as before tenure conversion, with the difference that now his jurisdiction in this matter applies only to the clan land outside the blocks.

Obligations

571 Mutual assistance and mutual obligation patterns provide a system of social security, a form of institutional safeguard

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[1] Similar changes have been reported in another Orokaiva area by Crocombe (1966:71-2) and Hogbin (1966:81-3).

571 against sickness, crop failure and other catastrophes. The mutual
[602] obligation system which operates among kinsmen 'acts as a man's
[182] trade union, his friendly or benefit society, his slate club and his orphanage; it takes the place for him of health insurance, and if needs be provides for his funeral' (Lawrence 1964:34).

121 If it is hoped to set up individual farmers independent of their kinsmen some substitute must be found for the traditional method of social insurance. For as Fisk (1961:777) has pointed out, 'in an underdeveloped country...ready and prompt access to assistance in time of need is a variable of considerable importance to the settler'. Attempts to break down traditional obligation patterns by individualisation of tenure have often met with little success. In Egypt (see Gadalla 1962:80) and in various parts of the Pacific (Crocombe 1964b:127 and 1965:15) land registration schemes designed to result in individual tenure have failed to achieve individual ownership and use of land.

476 There are indications that traditional obligation patterns may
571 be continuing at Ombi-Tara since tenure conversion was introduced.
178 Blocks were cleared by kin groups in accordance with custom. Two
[689] men mentioned that there had been an arrangement whereby if a person worked on the block of another man but the second man did not reciprocate, he would have to pay the first man 80 cents. However, both people said that no one had had to pay it. Two men who were working for wages on road maintenance near Ombi village bought food from the nearby store for those who helped clear their blocks. Five people claimed that they had helped clear other people's blocks but had not received any assistance in return. Everyone who was questioned said that no new obligations had been established by the process of clearing but this may be open to question.

423 It has already been mentioned that conversion involved substan-
657 tial redistribution and equalisation of right holdings. Whether obligation to the 'donors' will be established as a result is a matter for future observation.

The blocks of three of the four absentee blockholders were being cleared and planted by kinsmen. The block of the fourth absentee had not been cleared at the time of our stay. It is likely that some obligations will be established by this assistance.

Two families are living in houses constructed on the block of another man; and several people have cocoa, coffee or bush rubber trees growing on blocks held by other people. These situations are discussed on p.29 below.[A]

The Ombi man who moved to his block to protect his taro from the sorcery of another villager replanted some of his taro on the block of a kinsman, for further protection. This was the only reported case of a person planting crops on the block of another

[A] [See Category 425--Analyst]

657 man since tenure conversion was introduced. It suggests that in
423 situations of stress, as when sorcery is feared, traditional tenure patterns may take precedence over the newly introduced system.

Several people mentioned that they will in future share the proceeds from their rubber with non-blockholding kinsmen, but most said they would not.

Inheritance of converted land

657 In law blockholders may depart from the traditional pattern of
423 inheritance when disposing of their land. As far as could be
428 ascertained, most of the Ombi-Tara people wish to continue the
[178] traditional Orokaiva inheritance pattern, under which the first son generally has some precedence. The first son is not, however, the sole owner but rather the nominal trustee of the land for all sons. If the landowner has no sons, his daughters may keep the land in trust for their sons and in some cases the daughter's husband may also acquire some rights.

Several people intend to pass their blocks to the first son only and expect any other sons either to take up another block on what is now clan land, or to gain wage employment in an urban area.

Work organisation

657 The time spent in Ombi was too short to enable any conclusions
423 to be drawn about the effects of conversion on work organisation,
182 but a few general points may be made. There was no set routine in
512 the sense of particular days being set aside for particular kinds of work. A number of people reported that Wednesdays and Fridays are set aside for Mission and Council work when required. During our stay no Mission work was done and Council work was done only on the first Friday, when most of the men went to a village two miles away to cut the grass around the Administration school, due to open the following week. Gambling occupied many people for much of Saturday and Sunday but others carried out normal work in the gardens on these days.

657 Husbands and wives worked together on food and cash crops, but
423 I am unable to estimate whether husbands work more on cash crops
182 and wives more on food crops as has been observed at times elsewhere.

[462] Five men were employed on maintenance work on the Popondetta-
[464] Kokoda road near Ombi for the full period of our stay, receiving
[465] $6.42 a fortnight. The need for cash to pay the Council tax and the Mission jubilee contribution led five others to work on road maintenance during the final week of our stay. Although working a thirty to forty hour week, the five longer term roadworkers have planted an average of 410 rubber seedlings each which is greater than the average of 346 seedlings for all Ombi-Tara blockholders.

121 452 The need for credit at Ombi-Tara where rubber is being planted may be less than at schemes where other crops are being promoted.[1] Bauer (1948:318) stated that where tapping and processing of rubber is done by family labour, 'many small-holders could almost be referred to as no-cost rather than low-cost producers'. The visiting World Bank mission suggested that credit could play an important part in securing local interest in planting rubber in consolidated areas, in organising group processing and marketing, and in providing scope for enterprising men to increase production (International Bank for Reconstruction and Development 1965:111).

It has been suggested both by the District Commissioner (Williams 1966:7) and by a former Agricultural Officer in the Northern District (Cheetham 1962:67-78) that it may be an appropriate time to reassess official credit policy, looking particularly at the criteria for providing credit to smallholders. Cheetham (1962:77) concluded: 'A farmer's ability to repay may be a better criterion on which to provide loan capital than the present notion of "credit-worthiness" in the sense of adequate tangible farm assets.'

Cash cropping and productivity

657 423 182 [311] It is too soon to determine the effects tenure conversion will have on cash cropping and productivity. However, even at this early stage a few observations may be made. The acreage under cash crops at Ombi-Tara has increased significantly since conversion. Before conversion was introduced, 167 cocoa trees, 92 coffee trees and 19 bush rubber trees were planted per adult male at Ombi-Tara.[2] In the fourteen months after the villagers began planting high yielding rubber on the converted blocks an average of 304 seedlings was planted per adult male.

[434] There is no shortage of food or suitable agricultural land. Both terrain and climate are favourable for growing rubber. There is easy [464] access to Ombi-Tara from Popondetta. Villagers are able to earn money to buy rubber seedlings from the Department of Agriculture by tapping their bush rubber, by working on road maintenance, or by working for wages on the Sangara ex-servicemen's plantations. The proximity of the Sangara plantations and the existence of bush rubber stands at Ombi-Tara provided villagers with experience in tapping and handling [177] rubber. The Sangara plantations also serve to demonstrate a 'European way of life' which many villagers find attractive and wish to emulate.

[241] Tenure conversion appears to have contributed to the improved cash cropping performance mainly by reducing the labour inputs required to establish cash crop gardens, thus increasing labour

[1] For example, the processing of green leaf into tea requires substantial investment (Clayton 1961:623).

[2] Excluding the two 'outside' blockholders and a man from Tara who declined to be interviewed (see p.1).

657 productivity. Consolidation of an individual's scattered plots
423 reduces the amount of time devoted to travelling and increases the
182 acreage which can be planted with cash crops in any one location.
241 The road running through the converted area allows easy access to all holdings and facilitates interpersonal co-operation by reducing the amount of travelling time involved.

657 Consolidation has facilitated the provision of assistance by
423 Department of Agriculture staff, increasing the effectiveness of
182 officers. Planting, pest control and general crop maintenance can
242 be more efficiently supervised where there is easy access to all holdings.

Increased assistance from the Department of Agriculture has been an extremely significant factor in the increase in cash cropping activity at Ombi-Tara. In the Northern District there are more agricultural extension officers per head of local population than in most areas in Papua-New Guinea.[1] The diligence, patience, and understanding of the Agricultural Officer who initiated the conversion scheme, the stationing of an Agricultural Assistant full time at Ombi-Tara to supervise the rubber nursery and the bush rubber processing unit, and the regular visits of extension officers from Popondetta have helped to provide the essential technical and managerial skills which are lacking in the village situation.

657 Tenure conversion appears likely to enable economies of scale
423 when the rubber trees come into production, hence increasing the
182 productivity of village labour. Economies may be gained in pro-
433 cessing the latex, since the relatively large output may warrant the introduction of larger and more efficient processing equipment; in transporting the processed rubber in bulk; and in marketing. One of the problems previously faced by Ombi-Tara cocoa producers, especially when prices were low, was that buyers did not consider it worthwhile to make the journey to Ombi-Tara from Popondetta for the relatively small amount of produce.[2]

While conversion introduces economies of large scale production it also retains one of the better features of the small holding system, the maintenance of individual incentives to increase production.

Ombi-Tara experience appears to support the well-known maxim of the Food and Agriculture Organization that tenure reform, in order

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[1] The principle of concentration of development effort was endorsed by the visiting World Bank mission (International Bank for Reconstruction and Development 1965:35).

[2] The argument for increasing returns to labour in an economy moving from pure subsistence to the production of a market surplus has been stated by Fisk 1964:164.

657 to be effective, must be associated with improvements in technical
423 skills and the provision of credit, transport and marketing facili-
182 ties. That individualisation of tenure does not necessarily lead
433 to improvements in productivity has been demonstrated in many areas including South Africa (Yudelman 1965:239), Ongoho in the Northern District of Papua (Crocombe 1964a:36), and the Cook Islands, where Crocombe (1964b:142) concluded that

> the issue of registered freehold titles by the Land Court of itself made little if any contribution to output in the early decades of the century and of recent years has had a negative effect.... Security of tenure must also be complemented by other measures if major increases in productivity are to result.

Tenure conversion at Ombi-Tara has enabled labour inputs in the establishment and maintenance of the rubber plantations to be reduced and appears likely to lead to economies of scale when the trees come into production. Conversion has facilitated, and has been complemented by, increased agricultural assistance. These factors together have contributed to the increase in cash cropping activity and improved labour productivity at Ombi-Tara.

657 423 (iii) As was the case before conversion, a man whose crops stand on another man's land retains his rights to those crops (in the local view, but not in law).

[425] (iv) As was the case before conversion, each man is considered by the villagers (but not in law) to have the right to extend his planting behind his present holding without consulting the clan leader or other members of the clan.

(v) It remains to be seen whether all villagers fully understand that all previously existing rights to land have been abolished since conversion, and whether in future some people may make claims on the basis of such rights.

[361] [178] (vi) Residence patterns appear also to be in accordance with traditional custom as those people who have left the village are living in hamlets composed of kinship groups and not as single farmers each on his own block.

Promotion of agricultural development

657 423 ●182 433 Even if tenure conversion alters the tenure system less radically than expected, it is still possible that it may act as a stimulus to indigenous agricultural development. The acreage under cash crops and labour productivity has increased at Ombi-Tara since tenure conversion was introduced. The improvement seems to be due more to the benefits arising from the consolidation of fragmented holdings than to increased security of tenure since the land rights that Ombi-Tara people held before conversion were sufficiently secure to allow them to plant cash crops.

Consolidation of holdings has reduced the labour inputs required to establish cash crop gardens by reducing the time spent travelling between the village and food and cash crop plots. Whereas previously each man had relatively small areas of land on each plot, making extension of plantings difficult, all his land has now been brought together on one twenty acre block. The provision of easy access to all blocks has facilitated interpersonal co-operation particularly in clearing bush lands, and has enabled officers of the Department of Agriculture to supervise planting, pest control and general crop maintenance more efficiently. This increased assistance from the Department of Agriculture has played an important role in increasing the acreage under cash crops by providing essential technical and managerial skills. It is questionable whether conversion would have led to a greatly improved cash cropping performance if it were not accompanied by increased agricultural assistance.

Tenure conversion appears likely to enable economies of scale to be gained in processing, transporting and marketing of produce when the Ombi-Tara rubber trees come into production, thereby increasing labour productivity still further.

851 marriage is in force; he is, in addition, considered to be the genitor of all her male offspring though not her female offspring.

842 It is obvious that the Orokaiva know the 'basic fact' that when a man and woman have sexual intercourse, the birth of a child often follows and that the latter, in common experience, does not occur unless preceded by the former. The recognition of this fact does not impel them to adopt a genuine 'theory of physiological paternity'; their basic theory remains that of spirit entry which is deemed essential to the conception of all children, whether male or female. The notion 842 of physiological paternity is introduced only 562 to solve a somewhat different problem: why the sexes differ in physiology and legal status. The answer runs as follows: the male is believed to have a special quality (*ivo*), not shared by the female. This is a strength or power enabling the male to play his distinctive roles and it is transmitted by a man to his son in the 'male blood' which enters the mother in intercourse. This is the *ivo* of the lineage. As women do not receive this type of blood, they cannot carry on the lineage: filiation is patrilateral. Having only the 'weaker' blood of their mothers, they become women.

842 Leach's essay on 'virgin birth' does a good deal to illuminate the Orokaiva case. The Orokaiva, like Christians and the people of ancient Mediterranean societies, believe that some births are the consequence of sexual congress whereas others are not. Both cultures have a further theory according to which some children may be conceived by a 'woman sleeping alone'. Furthermore, both systems explain conception in these circumstances by a spirit entering a woman and fertilising her.

614 Now, as I understand Leach, in all quoted
● 182 cases of parthenogenesis, a great social distance separates a father of egregious status from a mother and maternal lineage of much lower status. In some of the quoted cases, the offspring inherits the father's high status while in others, the offspring remains (as in the Trobriands) in the lower 'stratum' of the mother. The somewhat unusual Orokaiva case fits this pattern quite well. Woman is not destined to stay in the clan but to be abducted or to elope and settle elsewhere, but her children will always covet the clan's land and her brother who is expected to love her is

614 not unlikely to meet her request. Her brother's
• 182 children will fear her constant demands and
her threats of sorcery. Her actual power is so
great that a religious construct, proclaiming
her social distance from the men of the clan,
and making her look low and insignificant,
may help somewhat to keep the embattled
[842] clan patrimony together. It is therefore
tempting to treat Orokaiva parthenogenesis
theory as offering further evidence for the
tension between patrilateral and matrilateral
kin, though this tension could be demon-
strated more easily by less esoteric means.

114 The Orokaiva case makes one wonder just
171 what constitutes 'knowledge of physio-
842 logical paternity'. Leach writes about 'basic
facts of physiological paternity' (1967: 41)
which anyone but an idiot would know. On
the other hand, Spiro speaks of a 'theory' and
compares 'physiological paternity' to the
'heliocentric universe' (1968: 244)—the
latter was a theory that man did not have
until the fifteenth century. Spiro does not
quite indicate at what point in time mankind
obtained 'knowledge' of the former theory,
but he evidently thinks it was well before the
birth of Jesus. I am not sure just how Spiro
would classify the case of the Orokaiva: are
they 'ignorant' of physiological paternity or
not? Are they less ignorant than the Tro-
brianders but more ignorant than the
Dobuans (who do not believe in virgin birth
at all)? Do not all these groups derive their
theory on this subject in precisely the same
way, namely in the context of a metaphysical
cognitive system? It seems to me that a sig-
nificant difference between the Melanesians
and modern man, if it exists at all, does not
lie in the substantive content of their theory
of physiological paternity, but in the capacity
of modern man to show by empirical evi-
dence that the Trobrianders are wrong, the
Dobuans right and the Orokaiva in between.
As for the contemporaries of Jesus, they seem
to resemble the Melanesians rather than
modern man, in that they had no such empiri-
cal evidence.

121 I think that in primitive thought we should
distinguish between empirical generalisations,
which may often imply no more than a rough
[813] statistical correlation, and deductive theories
[824] implying causal connexions. It is notorious
that primitive thought will easily move from
the former to the latter, as the Orokaiva do,
for instance, when they note that *taega* leaves
fall while the main taro crop is coming up and
postulate that it is the dropping *taega* leaves
that cause the crop to prosper. There is no
reason to believe, however, that the Orokaiva
invariably make a causal theory out of an
empirical correlation and they may even omit
to do so where modern thought would
applaud such a step. A person may 'know' as

731 that the Orokaiva explained these cases not by sorcery (as they
[753] regularly do) but by homesickness.

The administration, in any case, seemed to be concerned about the malaise of refugees kept in coastal camps. All Australian informants to whom I spoke agreed that it was this malaise (and pressure by the Orokaiva) which led to a shift of the Eroro Bay refugees to Popondetta at the earliest opportunity (in April). A few weeks later they were allowed to go to Irihambo, a new settlement at the boundary of Sangara territory. Thus, one of the variables of special significance in the comparative study of displaced communities--removal from the home territory--was of minor significance in the case of the Orokaiva. Almost as soon as the immediate danger of the eruption was passed, people pressed for a return to their home territory and this pressure was not
● [182] resisted for long. If the eruption had a lasting effect on Orokaiva norms of behaviour and belief, this was not due to changes of location, but rather to the experience of the disaster and the unexpected scope of Australian assistance, and to new residential patterns introduced when the displaced communities were resettled.

657 The government had long followed a policy of consolidating
361 hamlets and villages, not only in Orokaiva territory but in all parts of Papua. This policy existed long before the government began to pursue actively its present objectives of social and economic development. When I asked senior officials of the administration for the reasons behind this policy, I was always told that village consolidation made patrolling and the maintenance of law and order easier and that regulations concerning hygiene, housing standards, road building were more easily enforced. It was the practice, well before the eruption, to keep lists showing the names of all inhabitants of the Orokaiva district. These lists were subdivided into village lists; a patrol officer visited (and still visits) each listed village once a year and all the persons listed as living in that village must then report themselves present. Deaths and births and marriages are recorded. It seems to have been the practice for patrol officers to instruct groups living in small hamlets to join other village units. Thus, in Sivepe many amalgamations of population groups occurred over the years and the people claimed that all these amalgamations were made in response to government instructions. Even if this is not always strictly true, there is nothing novel in the pressure put upon Orokaiva after the eruption to go and live in consolidated villages.

[731] On the other hand, there were several factors favouring such a development. The first of these was the continued restriction placed upon residence near the mountain. Even after May, 1951, there were several thousand Orokaiva who could not return to their old village sites. The villages where they were settled were

628 together, the church council, with representatives from all the
631 villages, deliberated together. This cooperation was a gradual
development occurring over the years under consideration; it will
731 be traced in detail in a later chapter. The setting up of wards
under the Higaturu Local Government Council led to further occasions
[794] for formal cooperation between villages belonging to the same ward.
It was characteristic of both the church and the government council
[797] organizations that they divided the Sasembata district into areas
with definite boundaries, each area comprising several villages.
The church recognized two such divisions, the government council
three. I have already emphasized that the idea of such boundaries
[192] was a novel one (see Map IX).[A] It is beginning to have two kinds
of effect: first, the strengthening of bonds between villages
within the same ward or the same section of a mission parish
(e.g., bonds between Sivepe and Isoge, which up to now have not
been closely allied) and secondly, the loosening of bonds between
villages divided by the boundaries which are now being defined
(e.g., bonds between Sivepe and Kongohambo, hitherto closely allied,
but now separated by administrative procedures).

These generalizations will be documented below; my task at
628 present is to consider contacts between Sivepe and closely allied
423 villages arising out of the eruption and relocation. More inter-
village cooperation was a far less significant factor than inter-
578 village competition, especially for use of the land. One of the
deep anxieties of the Orokaiva in the refugee camps and later in
resettlement villages such as Irihambo, Awala, Kongohambo was that
if the people did not return to their land, some others might
decide to occupy it and it might be impossible to dislodge them.
This was a very real danger because neither in 1951 nor at present
is there in existence a land register from which the ownership of
individual or village parcels may be unequivocally established.
The Orokaiva plant boundary trees round their blocks of land and
[685] there is a taboo on interfering with these. This is not merely a
supernatural taboo; interference with a boundary justifies a
killing. It is far less clear, however, just what rights a person
holds in a particular parcel. As this is a crucial issue in the
whole history of Orokaiva resettlement, I should explain this in
some detail.

Crocoube and Hogbin provide an excellent example of the
423 ambiguity of Orokaiva land rights. After wars with the Sangara,
613 both the Andiriha and the Tandai'undi clans were driven from their
villages and settled down together in a village named Sambogo.
[621] Later, some of the Andiriha set up Inonda on land to which the
Tandai'undi had superior rights. At present, this land is used by
Andiriha, and upon inquiring into the legal basis of tenure I was
given the following explanation. Two daughters of the Tandai'undi
owner's lineage married into Andiriha and were given the Inonda
[428] land to "look after." As is usual among Orokaiva, this right to

A [See Cat. 116, p. End Map 8--Analyst]

177 part of village layouts, are a blend of Papuan tradition (the Orokaiva
[351] have always been very fond of flowers and planted ornamental shrubs)
and a new Australian-derived passion for military regularity. This
[363] is evident especially in the emphasis placed on building the houses
in a line, and equidistant; the shrubs are also rigidly in line.

177 The changes are to some extent due to the experience of Ilimo
392 camp which is reflected in the style of Old Sivepe. The changes found
in New Sivepe are due to subsequent influences, mainly that of the
Local Government Council. Once village improvement became an ideol-
ogically validated objective, the way was open to the adoption of
further innovations borrowed from the Kokoda district, such as the
use of "timber." I did not see "timber" used East of the Sasembata
district.

[192] It may well be that the increase in house size, coupled with
the present need to build a large number of houses in the same year
to form a major modern village, would rapidly have led to a critical
shortage of sago in Sivepe if people had continued to use this material
for walls. Thus, the present practice of using timber instead of
sago could well have an economic explanation. Sago roofs can be
built without destroying the plants, whereas plants have to be cut
entirely to produce sago walls. I was not, however, given an economic
explanation for the change-over to timber; I was told only that it
was better-looking and provided good protection against wind and rain.
But nobody would say anything against sago; sago walls are "also very
good."

177 Tools and skills: Traditional agriculture has undergone considerable
241 change, as elsewhere in New Guinea, by the introduction of steel axes,
[412] bush knives, grubbers etc. Thus the preparation of the soil for
gardening has been greatly facilitated. There has, however, been no
change in the operations concerned with the plants themselves, planting
and harvesting being done with wooden digging sticks. Many of the men
have had experience in rubber plantations, with operations such as
tapping; there are a few tapping chisels in the village. Training in
coffee cultivation occurred after the eruption, but it was not until
a few years ago that hulling machines were introduced. Every grower
177 at Sivepe has, as far as I know, only one coffee sack. The basic
245 skills needed to bring rubber and coffee to market have been mastered,
249 but up-to-date techniques for improving the yield of the trees have
not been mastered. The difficulty, in this respect, is not purely one
of communication, as men who have been employed as rubber tappers must
be familiar with certain rules regarding care of the trees which are
definitely not being practised. Similarly, I doubt whether one can
explain failure, on the part of Sivepe growers, to prune their coffee
trees by ignorance of pruning techniques. The true explanation would
appear to be a lack of confidence that the rules make any difference
to the yields. In Hohorita people began to prune their coffee trees
when they discovered they were then easier to harvest. But the whole
pattern of reasoning upon which Western horticultural practises are

361 conceived as part of it. (People spoke of the residents as living "in Sivep," not "in Orinasusu!")

In the new village, the number of houses built outside the regular rectangular plan was even larger. Of the 25 houses, only 14 were strictly where they were supposed to be; a further three dwelling units might be considered "in line" if the term were used very broadly, but eight formed a line of their own, roughly parallel to the two planned rows, with doors facing towards the arsha. This line was on more elevated ground than the rest of the village, and about two chains behind the nearest planned row. The decision of all these householders to build outside the regular rows is in part explainable by features of the kinship structure, to which I shall refer later. We should not ignore, however, certain historically and psychologically determined attitudes which resisted the regular village pattern. In this connection it is significant that in only five out of 11 cases the irregularly placed houses were built on land to which the occupants had some special claim. Houses that were out of line were at first all of much lower standard in size and construction.

[182]

Because of the very close scrutiny the inhabitants of a village give to one another, as well as the numerous regulations that are now being enforced in villages, Orokaiva feel the threat of regimentation implicit in the large resettlement villages. Even the small distance of two chains provides a valuable measure of detachment for people many of whom used to live in much smaller villages and managed to evade most of the modern regulations. One man ceded to pressure and built a house in the "line" in which he placed his daughters-in-law and their offspring but he stayed in the old house on the hill. There was much criticism too of the unwillingness of one man on the hill and the owner of the detached house No. 8 to clear the tall weeds between their houses and the rest of the village. I feel sure they let these weeds grow with the specific purpose of emphasising the distance. It was generally agreed (and confirmed by Mr. Waddell's data) that these two men were among the most diligent gardeners in the village, so that "laziness" provides no explanation.

[342] A further dimension of freedom is always available to Orokaiva by the institution of the "garden house." A garden house is a rough shelter where people can sleep in the heat of the day while they are at their gardens. Some garden houses, however, are good, sound structures suitable for semi-permanent residence. Sometimes people stay at them overnight, sometimes for several nights in succession. This is done at times when there is a great deal of garden work urgently needed; by staying at their garden houses people save time and avoid distractions. It is also done when there has been a quarrel and people like to stay out of sight for awhile; finally, it may be done simply for reasons of privacy. Some men stay at garden houses far more frequently than others. One Sivepe man is staying there constantly and has no village house at all, nor did he have one in Old Sivepe. Generally, stays of more than one week at one time are most unusual. Most people never stay away for longer than one night.

or even force Orokaiva settlement patterns from the traditional scattered hamlet system to village or even town living. Another tough question was *how* far Government should step in to supervise matters of economic and social welfare, including elementary schooling which hitherto policy had left almost wholly to the Anglican Mission. The majority of the mountain Orokaiva are now adherents of this Mission, the only body operating in the area. Questions relating to land tenure, social group realignment, leadership, law and order, and other matters involving local custom had also to be faced, especially in the course of the first experiments in resettlement.[4]

Officials and Mission workers reported that the explanations of the "cause" of the disaster given to them by Orokaiva, were, in general, of a supernatural nature: "God" was punishing them for "sins" such as "not supporting Mission and Government plans for development," "not building new churches as requested by the Bishop," or "not helping the Allies enough during the war." However much these may have pleased the hearers, the fact seems to be that there were resulting strong feelings of insecurity and even of guilt in their retrospective look at the pre-eruption way of life.[5] Officials who know the Orokaiva considered that these feelings undoubtedly helped to foster the extraordinary degree of cooperation and orderliness in situations where large numbers of people were necessarily herded together and shifted around without benefit of the traditional niceties and proprieties.

This raises the whole problem of interpreting the overt events here summarized in terms of their cultural and individual contexts. In discussing theory relating to the dynamics of change and resistance to change, the writer, along with others, has referred elsewhere to the general tendency for peoples to be pre-conditioned by the characteristic sets of their culture and personality norms, to be differentially "adaptable" or responsive to change in the face of new experiences.[6] The impression gained in this case is that subject to inevitable factors of shock and disorganization, the Orokaiva were culturally predisposed to respond to the traumatic experience here described with something approaching maximum adaptability.

The mountain Orokaiva are shifting cultivators, and supplement their staple food, taro, with sweet potato, yam, banana and sugar cane. Flesh from domestic pigs, chickens, dogs, and wild game is what Williams calls "a dainty rather than a diet." "Fresh ground," says this ethnographer, "is continually cleared for new plantings" in the typical pattern

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4. These matters are discussed particularly by C. S. Belshaw, an anthropologist working in Papua under the auspices of the Australian National University Research School of Pacific Studies, as a result of a visit to the area in April, 1951; see his "Social Consequences of the Mount Lamington Eruption," *Oceania*, 21, 4, pp. 241-252 (1951). This article was not seen until after the first draft of this paper was completed, and as the approach is considerably different the two papers are complementary rather than unduly overlapping.

5. Belshaw, *op. cit.*, p. 242, stresses this "guilt" factor.

6. F. J. Keesing, "Some Notes on Acculturation Study," Sixth Pacific Science Congress, *Proceedings*, IV, pp. 59-63 (Berkeley, 1940); "Cultural Dynamics and Administration," Seventh Pacific Science Congress, *Proceedings*, 14 pp., mimeographed (New Zealand, 1949).

24: Schwimmer E-5 (1966-1973) 1977
OJ23 Orokaiva OJ23

partnership with European power are fully canvassed, but conflicts arising out of the relocation of refugees after the eruption and conflicts concerning land tenure are not reflected in ideological discourse related to the disaster. How can we explain this selectiveness?

We may finally ask: To what extent have signs communicated by the eruption become an integral part of the Orokaiva system of thought in 1966? To what extent do they appear in the rhetoric expressing current ideologies? To what extent has the eruption generated these ideologies? How do cognitive systems adapt themselves to far-reaching events (such as the establishment of Australian authority) which call into question the traditional rationale for behavior? In short, the Orokaiva data lead us to an exploration of the dynamics of non-Western thought.

The factual material presented here corresponds closely to the preoccupations agreed on by the contributors to this volume. I commence with the presentation of some background data, emphasizing institutional, transactional, and ecological factors. The semiotic analysis that follows is focused on crisis behavior. The analysis will bring to light conflicts in two areas which are of special concern in comparative study of exile and migration in Oceania: the macrosystem/microsystem relationship and the maintenance of ethnic boundaries.

My discussion of land tenure conflicts, ignored in the ideological discourse under examination, will deal with the cultural meaning of spatial movement and the significance of land at various levels of culture. It will be demonstrated that although land tenure does not figure in ideological discourse about the eruption directly, it is integrated into ideological discourse indirectly.

The use of semiotics in anthropological analysis is at an early stage of development. Among the well-known pioneers in America are Bateson (1935, 1951), Mead (1964), Sebeok (1970), and sources such as E. T. Hall, Alfred Hayes, and Weston LaBarre. In this chapter, I have relied a great deal on the work of Lévi-Strauss (especially 1958, 1960, 1962), whose semiotics forms an integral part of his structural comparative method.

Semiotics has inevitably drawn extensively on linguistic concepts, since linguists have traditionally engaged in sophisticated analyses of symbols. The present chapter owes a debt to Saussure, to Hjelmslev, and especially to Barthes (1964a, 1964b). I would

24: Schwimmer E-5 (1966-1973) 1977
OJ23 Orokaiva OJ23

tion perished in the eruption and the survivors were therefore not fully instructed in traditional religious knowledge. Innovation proceeded without the resistance an older generation might have offered had it survived. I have argued elsewhere that this absence of the elders led to striking changes in the Sangara perception of the world (Schwimmer 1969:70–71).

If we compare relocated villages such as Hohorita and Sivepe with villages touched less by the disaster, such as Inonda on the alluvial plains, we notice that the former villages are larger, display more of the innovations advocated by the government, have a higher level of school education, and have responded more to government-sponsored schemes such as coffee growing. In my detailed report (Schwimmer 1969), I was inclined to ascribe such differences to the effect of close contact and guidance during the period immediately following the eruption, but such an explanation should be treated with caution.

The differences are probably due largely to ecological factors described in the report. Inonda land provides more animal foods; it is slightly closer to wage employment and markets; the climate is less suitable for cash crops than in Sivepe. The population, due to its sparseness, is relatively deficient in health and educational services. Hence the conditions for cooperation with government programs were less favorable than at Sivepe. Furthermore, the observed differences may also be due to historical factors. While coastal and foothill areas had been missionized and in contact with the administration for many years, the intervening Sauaha groups including Inonda were defeated and sustained heavy losses in the warfare of the early postcontact period. They subsequently remained aloof from white contacts. After the Japanese occupation, some of their men were hanged by the Australians for having acted as collaborators.[11] Hostile feelings are still an impediment to the acceptance of government and mission programs.

Such social consequences of the Mount Lamington eruption do not in themselves lead readily to illuminating anthropological generalizations. The actions of government and mission immediately after the eruption greatly relieved the distress of the population, but we cannot establish that these actions, directly and specifically, led to major social changes. One might therefore be inclined to view the eruption of Mount Lamington as lacking serious anthropological interest, yet such a view would greatly

tary within the user's agnatic group. Although the use rights were, at first, mostly granted as an act of friendship, occupation may continue even when positive reciprocity is no longer well maintained between owner and user and the owner would like to find pretexts for recovering the land.

It is a clear rule that land reverts to the owner as part of his residual rights as soon as the user ceases to occupy it. Hence departure, even by individuals, at once raises a problem of maintaining control over use-right land. An individual does not leave his land for more than a few days without appointing some person to look after it. This person may be an agnatic or uterine kinsman or an affine whose wife is consanguine to owner or user. Men taking jobs outside the village regularly resort to the appointment of a caretaker for their land. This practice has not only ritual but also legal implications. The caretaker will fight other claims to the land, if only because he himself has become the occupier and the legal beneficiary of its products. If the original occupier stays away too long and his social position in the village is not strong, he may have trouble recovering his land from the caretaker upon his return. This is a risk arising in many cases of labor migration, uxorilocal marriage, adoption, or departures prompted by personal conflicts.

Interviews I conducted in 1966 and 1967 showed that the evacuees at Ilimo were extremely fearful for the safety of their land. The danger they feared most was the activating of residual rights by persons whose agnatic group had at one time been associated with their land.[11] Community relocation, by its very nature, leaves nobody behind to look after the land. It thus creates a legal vacuum that is ordinarily absent in migrations of individuals and small groups. Any individual who sneaked out of Ilimo and settled on a coveted piece of land to which he had some residual rights would be hard to dislodge under the conditions of Pax Australiana because the Australians, so far, have been able to maintain law and order without the benefit of land registration.

The fears about losing the land which explain much of the tension at Ilimo Camp are a direct consequence of conflicts implicit in Orokaiva social structure. The institution of land borrowing, the retention of residual rights over several generations, and the consequent multiplicity of rights and claims over land parcels are directly related to the small size of corporate groups and the

24: Schwimmer E-5 (1966-1973) 1977
OJ23 Orokaiva OJ23

dependence on the exchange system for the creation of larger solidarity networks. In a culture where warfare was endemic, these larger networks were indispensable in order for the traditional land tenure system, with its emphasis on multiple rights, to be socially adaptive under precontact conditions.

The 'new age' ideology, as expounded in 1966–1967, does not ignore these basic conflicts but incorporates them in the notion that multiple ownership belongs to the 'past age' whereas sole tenure is the modern ideal. There is strong support today for administration moves to establish a system of sole titles and to abolish the institution of multiple rights. Cash cropping has emphasized the need for such a change. In practice most Orokaiva today plant cash crops on patrimony land rather than on land on which there are invocable claims of residual rights.[18]

The movement toward individual landholding did not start in the Northern District until the mid-1950s, when there was a government-inspired attempt to have landholding titles issued by the Higaturu Local Government Council (see Crocombe and Hogbin 1963). I am not aware of any organized attempt to reform the system of Orokaiva land titles at or before the time of the eruption of Mount Lamington. If such reform is being introduced into the 'new age' ideology today, this must be credited to indoctrination mediated through members of the local government council.

We have seen that, at Ilimo, the traditional land tenure system was the basic cause of a conflict which strongly affected the course of the administration's resettlement policy. The officer in charge of the camp perceived two main purposes: to keep the people safe from the volcano and to rehabilitate them afterward in villages which would have a more modern life-style. As we have seen, the Orokaiva accepted both these objectives as desirable and benevolent. On the other hand, there was a difference in the importance that Orokaiva and administration attached to an early return to the home villages. The administration might have preferred a longer period of evacuation for the sake of safety from the volcano and also for the sake of its program of community education. They met, however, with a restlessness which made them hasten the disbanding of the camp. The same restlessness induced the Orokaiva to agree quickly to some programs of resettlement, not because these programs appealed to them very much but because agreement would hasten their return to the land. European

24: Schwimmer E-5 (1966-1973) 1977
OJ23 Orokaiva OJ23

10. Compare this with the school at Sasembata, which teaches to grade six.
11. A small band of Orokaiva captured European fugitives, including male and female missionaries, and handed them over to the Japanese. The members of this band came from the area east of Mount Lamington inhabited by what Williams called the Sauaha tribe.
12. Though the Sumbiripa cycle of myths was not noted by Williams, I feel confident it existed prior to 1951, partly on evidence given in Schwimmer (1969) and partly on the evidence of a myth recorded in Belshaw (1951).
13. For sources on Orokaiva leadership, see Reay (1953) and Schwimmer (1967).
14. The term "Waseta tribe" used by Williams is perhaps unfortunate, as I demonstrated elsewhere (Schwimmer 1969:49–53). It is used here for the sake of convenience to group together the people from the Waseta area, all of whom were quartered at Ilimo evacuation camp. The name "Waseta" is not used as a tribal name by Orokaiva; it denotes no more than the village where Williams happened to do his fieldwork.
15. See also Waddell and Krinks (1968:16, fn. 3). In the final section of this chapter, I argue that the geophysical explanation is important for anthropological analysis, since it foreshadows structural change in the Orokaiva cognitive system.
16. These two oppositions are, as I understand it, singled out for detailed study in most of the chapters in this comparative volume. Unfortunately, a more detailed discussion is impossible in this chapter. Transactions between government and people during the relocation process have been described fully in Schwimmer (1969), including the massive administration intervention in the evacuation camps, the changes of location of government and mission centers after the eruption, and the gradual widening of the scope of government and mission activities. In my earlier report, I also referred in detail to the manner in which the relation between whites and Papuans is mediated by Papuan mission teachers, village constables, and other functionaries. On an ideological level the entire 'new age' rhetoric discussed in this chapter may be regarded as a form of mediation between microsystem and macrosystem.

    With regard to boundary maintenance, empirical evidence is available in my earlier report about the relations between the evacuees and the people among whom they lived. At Ilimo something akin to traditional friendly host-guest relations were established. I stress in the present essay the ambiguity of the boundary maintenance patterns. There is an ideology advocating unity and there is increasing evidence of common action, especially in the context of formal organizations set up under the influence of administration and mission, while individual webs of intertribal relationships tend to become denser as a result of migration associated with schooling, employment, and so forth. At the same time, tribalism is still the underlying principle in most transactional contexts.
17. This does not contradict my earlier statement (1969:66) that there was a brief period when the evacuees feared the government would take their land. Kaad reported to me that this fear existed, and I do not doubt it. In

25: Schwimmer E-5 (1966-1970) 1974 OJ23 Orokaiva OJ23

Rich data on the symbolism defining the *philia* relationship in religio-philosophic terms are available in Strathern (1971). I have already expounded elsewhere (Schwimmer, 1972) that the theme of *philia* (its establishment, disruption, and restoration) is a central issue in New Guinean thought and that it enters into many levels of culture: geographical, zoological, social, magical, religious, and aesthetic.

THE OROKAIVA CASE

Up to this point, I have given some empirical illustrations of simple analytical distinctions. Thus, we can no longer take for granted that the *philia* universe always consists of friends and kin for it may define all friends as kin (as in the Maori) or vice versa (as in the Telefolmin). On the other hand, there are societies where the distinction friend/kin is of subordinate importance because the *philia* universe is classified by different criteria such as cooperative/competitive (Tangu) or real/feeble (South Fore). Then again, there are societies where consanguinity is a distinctive criterion within the *philia* system, but only in combination with other factors (Melpa).

If the Orokaiva case, of which a description now follows, seems more complex than the preceding ones, this may be attributed, at least to some extent, to my method of presentation. While most Oceanic sources are too brief on the subject of friendship to enable us to go beyond summary statements,[5] the Orokaiva facts resemble those reported by Burridge (1957a; 1969) in many respects. But in some respects, the Orokaiva system seems more explicit. It differs from Tangu in having a slightly stronger patrilineal emphasis, less emphasis on collateral relations, and a stronger avoidance of affines. The Orokaiva marriage system, reported elsewhere (Schwimmer, 1970a), seems more highly structured. These factors are probably related to higher population density, larger social networks, higher soil fertility, and more pervasive warfare.

The Orokaiva (population 25,000) live on the fertile volcanic loam of the Mount Lamington foothills. Their main crop of taro once supported villages of six to twelve families, although now, the villages are often larger mainly because of pressure from the Australian administration. Williams (1928, 1930)[6] characterized the society as patrilineal with a strong bilateral emphasis. Women hold a relatively high position which is maintained

5 Early accounts of New Guinea friendship relations are in Mead (1938) and Williams (1940). Later accounts of a *namel* type of relationship are in Pouwer (1955) and Hogbin (1964) and of the *otavo* type in Heider (1970), Oliver (1955), Schoorl (n.d.). The "resemblance friends" found by Williams among the Elema are not unlike the fictive *simbo* of the Orokaiva.

6 Other useful sources on Orokaiva social organization are Crocombe and Hogbin (1963), Rimoldi (1966), Krinks and Waddell (1968), Schwimmer (1967, 1969, 1970a, 1970b, 1970c, 1972).

25: Schwimmer E-5 (1966-1970) 1974 OJ23 Orokaiva OJ23

572 602 grasp of certain fundamental psychological principles. For instance, the Orokaiva classification scheme relates the *simbo* kind of friendship symbolically to the marriage bond which, indeed, has the same quality of total interdependence between persons whose consanguineal links are distant, if present at all. Some friendships are indeed of this kind but not all: the Orokaiva system reflects this fact in that some non-kin relationships are classified as *simbo* while others are classified as *apa/eambo*, *otavo*, and so on.

If we cannot distinguish friendship from kinship on the basis of the content (the role attributes) of relationships, it is possible to make a distinction of a formal kind.[10] One characteristic of all friendship relations is that the [601] partners are kept free of ritual avoidances such as those between affines. The wife of a sibling type of friend is given a sibling term of address; the wife of a *simbo* type of friend is herself classified as *simbo*. Another formal characteristic of all these relations is that they are equivalent, but additional to the kinship links of the same type.

[182] The continual threat of warfare and disruptive disputes impels persons to maintain a number of residence and alliance options in many places. Friendships develop especially where the kin universe is inadequate in supplying these options and leaves dangerous gaps in the network; Orokaiva friendship patches the gaps in this network. This seems a humble and subsidiary role indeed. Nonetheless, the existence of a regular mechanism to fill these gaps makes a crucial difference to the nature of the total system. The fact that there is an institutionalized freedom of recruitment of members to each of the *philia* categories opens up the system and gives it a dynamic flexibility. Ascriptive criteria need never fully determine membership groups because a dimension of freedom in recruitment is given by the friendship customs.

[177] [609] This fact offers a useful beginning for an analysis of the relations between Orokaiva and Europeans, as the Orokaiva system had from the beginning certain social concepts which enabled them to fit the Europeans into their scheme of social relations. The fact that they are strangers does not in itself leave them out of social recognition. Time does not permit this line of analysis, but it is worth remarking that in the absence of a friendship category, Orokaiva would not be able to adapt themselves as easily to the modern type of intercourse with other tribes and other races. The Orokaiva never had a truly closed society. They had rules for setting up relations with strangers, and these relations included marriages, as I have shown elsewhere (Schwimmer, 1970a).

[21] If we now turn from the Orokaiva case to more general questions regarding friendship, we may suggest that friendship is best regarded as a residual category within the *philia* universe, in that any *philia* universe must contain a regular process for the recruitment of strangers. Blau (1964) has described the psychological aspect of this process. The present essay has been

10 I am using "form" and "content" in the same sense as Levi-Strauss (1958).